

III. REMARKS

1. Claims 7-10 are new.

2. Claims 1, 2, 5 and 6 are not unpatentable over Persson (U.S. Patent No. 5,442,635) in view of Ohta (U.S. Patent No. 5,878,277) and further in view of Crisler et al. (U.S. Patent No. 5,594,738) ("Crisler") under 35 U.S.C. §103(a). None of the references disclose an asymmetric allocation of time slots, whereas Applicants' invention is based on asymmetric allocation, in which more time slots are allocated for a mobile station in the downlink direction than in uplink direction.

Neither Persson nor Ohta disclose the multislot capability recited in claim 1. Therefore, their relevance in relation to the present invention is very minimal. GSM-specifications, on the other hand, disclose only a symmetric resource allocation, in which time slots are allocated e.g. in a 1 + 1 or 2 + 2 manner. In Crisler only symmetric resources are allocated.

In Crisler's figure 1, referred to by the Examiner, the time slot allocator 101 does indeed allocate uplink timeslots, if transmission resources are required by the communication unit 102. However, the Examiner's attention is directed to column 3, lines 40 to line 50 where it is disclosed that there is always a corresponding downlink time slot for every allocated uplink time slot. As a result of this, Crisler always allocates resources symmetrically, which practically means 1 + 1, 2 + 2, and 3 + 3 solutions. This is not what is being claimed by Applicants. Also, referring to column 9, lines 39 to 49 of Crisler, it is very clear that there is always a corresponding downlink time slot for every uplink time slot. This means that there cannot be asymmetric allocation as in Applicants' invention because an

uplink time slot is always allocated together with a downlink time slot. This is clearly a one to one correspondence.

Although Ohta discloses an uplink band 10 ranging from 10 to 50 mhz and a downlink band 20 ranging from 70 to 450 mhz, this is not the same as "allocating a greater number of time slots in each downlink TDMA frame than in each uplink TDMA frame" as claimed by Applicants.

Respectfully, carrier frequencies do not directly relate to time slots. However, even so, FIG. 12 discloses that the number of carriers is the same in either direction. The portion of Ohta referred to by the Examiner, FIG. 2A, Col. 8, lines 37-56, merely indicates that the downlink band (bandwidth) is broader than the uplink band. This does not in any way imply that there are more TDMA time slots allocated in the downlink than in the uplink. Frequency bands are not the same as time slots, since frequency and time are different. Ohta merely discloses that the bandwidth of the downlink band is greater than the bandwidth of the uplink band. This is not the same as what is claimed by Applicants.

Rather, Ohta definitively recites that only one time slot in a TDMA frame is allocated for each terminal for each direction. (Col. 2, lines 37-41 and FIG. 10). When Ohta refers to the TDMA scheme, Ohta speaks to an equal numbers of time slots. "In the TDMA scheme, the data channel is also configured to require two time slots for uplink and downlink". (Col. 13, lines 11-13).

The Examiner states it quite succinctly. "An entire band 10 utilized for uplink signals...while an entire band 20 utilized for downlink signals." (Page 4, lines 7-10 of Detailed Action). Although each band may have a different bandwidth, Ohta does not disclose or suggest the use of more than one band, let alone more

than one "timeslots". Thus, Ohta cannot be used to disclose this feature of Applicants' invention and one of skill in the art would have no reason to look to Ohta or use Ohta to achieve "allocating a greater number of time slots in each downlink TDMA frame than in each uplink TDMA frame" as claimed by Applicants.

Although the Examiner refers to GSM standards or disclosing a "multi-slot" mode, it is only in terms of "symmetric" resource allocation, which is not the same as the asymmetric allocation of time slots as claimed by Applicants.

Furthermore, it is respectfully submitted that the Examiner has not demonstrated any motivation to combine the references for the purpose of allocating a greater number of time slots in each downlink frame than in each uplink frame. As noted, none of the references disclose or suggest at least this feature of Applicants' invention and the combination of references can not result in this feature of Applicants' invention. At most one might have Crisler's TDMA frames for uplink and downlink (a symmetric number of frames) and, by applying Ohta, a variable bandwidth or bands in each frame. However, this is not the "asymmetric" arrangement of Applicants' invention. It is respectfully submitted that the Examiner is using hindsight knowledge of Applicants' invention to impute the limitation of asymmetric time slots (allocating more time slots for downlink than in uplink) to the combination of references.

Thus, it is submitted that claims 1, 2, 5 and 6 should be allowable.

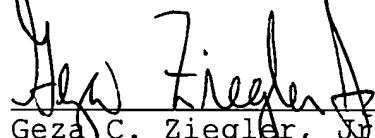
3. Claims 3 and 4 are not unpatentable over Persson in view of Ohta and Crisler and further in view of Galayas et al.

As noted above, the combination of Persson, Ohta and Crisler does not disclose or suggest allocating a greater number of time slots in each downlink TDMA frame than in each uplink TDMA frame. Claims 3 and 4 should also be allowable at least in view of their respective dependencies.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A check in the amount of \$950 is enclosed for a three-month extension of time. The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

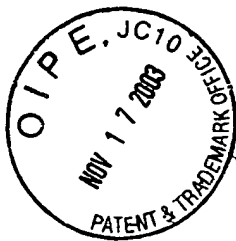
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